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## Motivational Climate, Self-Confidence and Perceived Success among Student Athletes

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### Abstract

This paper examines the relationship between the perceived motivational climates of student athletes in Universiti Sains Malaysia with regard to their perceived success in their respective events. This paper also queries if the self-confidence of student athletes in Universiti Sains Malaysia acts as mediator to their perceived motivational climate and perceived success. A total of 80 completed questionnaires were returned and analysed using Smart Partial Least Squares second generation structural equation modelling software. The results indicated that self-confidence of student athlete play a mediating role in the relationship between perceived motivational climate and perceived success in organization. The findings contribute to our understanding on the importance of motivational framework on research pertaining to student athlete.

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**Keywords:** motivational climate, self-confidence, achievement goals, student athletes

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### 1. Introduction

A Malaysian national sport policy was introduced in the late 1980s to provide guidance for high performance sport and mass sports developments in Malaysia (Brownfoot, 2002). This policy emphasized the importance of sport as a mechanism for Malaysian to improve health, generate economic benefit, reduce crime, increase educational attainment

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and build stronger communities. In Malaysia, the opportunity to play sports in schools, universities, sport clubs, or recreationally, is available to all. Malaysia possesses world class athletes especially in badminton, sepak takraw, squash, cycling and hockey but they face difficulties to maintain their reputable position due to lack of replacement athletes; incompetent management; and internal issues conflicts involving the sports body (Chiu, Mahat, Hua, & Radzuwan, 2013). To counter such problems, students' involvement in sports has been given serious attention in Malaysia where their involvement in sports activities is considered in getting a place in Malaysia public university. In fact, annual sports tournaments among universities are organized to support in supplying talented athletes for the country. In connection to this, every university has a pool of sports coaches to prepare the institution's team for the tournaments.

Apart from various government activities particularly from university to enhance student's sport performance, knowledge pertaining to goal orientation of student athlete is imperative. Based on achievement goal theory (Nicholls, 1984), there are two types of achievement goals disposition which reflect student athlete judging their own competence and define success or failure in sport. The first orientation is termed as task or mastery. The second orientation is termed as ego or competitiveness. The first orientation mentioned that student athletes judge success based on personal improvement and mastery of the task while the second orientation mentioned that the student athletes judge success based on comparison's subjective assessment (Gómez-López, Granero-Gallegos, Baena-Extremera, & Abalde, 2014). Study with regard to goal orientation effect of student athletes in university is imperative in order to understand the phenomena of dropout between student athletes in university sport activity. Another important concept in achievement goal theory is the motivational climate created by student athlete's family, friends and coaches (Ames, 1992; Duda & Ntoumanis, 2003). In task-involving motivational climate (mastery-oriented climate), student athletes are evaluated on the basis of their personal development, rewarded for effort and individual improvement, and placed in mixed-ability grouping, while in ego-involving motivational climate (competitive climate), student athletes are evaluated on normative standards and social comparison between individual (Ames, 1992; Newton, Duda, & Yin, 2000). Previous study revealed that task-involving motivational climate is associated with task approach goal (Cumming, Smoll, Smith, & Grossbard, 2007; Jaakkola, Ntoumanis, & Liukkonen, 2015; Newton et al., 2000; Seifriz, Duda, & Chi, 1992; Smith, Cumming, & Smoll, 2008; Smith, Smoll, & Cumming, 2009; Vazou, Ntoumanis, & Duda, 2006).

In essence, previous studies within the sports management context, situational motivational climate, and achievement goal have simultaneously been using the two alternative approaches. The first one, focuses on the relationship between situational motivational climates to dispositional achievement goal to motivational consequences, while, the second approach, dispositional achievement goal leads to situational motivation climate and finally, to motivational consequences. This study propose that self-confidence also plays an important factor that distinguishes motivational consequences between successful athletes from unsuccessful ones in terms of both their mental states as well as their performances (Feltz, 1988). With regard to the relationship between self-confidence and situational motivational climate, previous study revealed that perceived motivational climates has significant relationship with self-confidence (Cecchini et al., 2001; Magyar & Feltz, 2003). Similarly, it also has been found that self-confidence has significant relationship with dispositional achievement goal (Skinner, 2013; Vosloo, Ostrow, & Watson, 2009; Woodman & Hardy, 2003). With the inclusion of the self-confidence variable in the relationship between situational motivational climate, dispositional achievement and motivational consequences, this paper will contribute to achievement goal theory which now has become a popular theory in sport and exercise psychology. Practically, this paper will contribute to knowledge pertaining to goal orientation of student athletes in Malaysia. Thus, on the basis of the above, the objective was to determine the mediating effect of self-confidence on the relationship between perceived motivational climate and goal orientation (perceived success) of student athlete. It has been hypothesized that self- confidence mediates the relationship between perceived motivational climate and perceived success.

## 2. Method

### 2.1 Participants

Sport athletes are chosen as respondents for the study. They are both male and female students of Universiti Sains Malaysia and they represent the university in soccer, hockey, netball, badminton, swimming, basketball, track events and volleyball. The unit of analysis for the study is individual.

## 2.2 Instruments

The questionnaire contained three constructs; namely, perceived motivational climate (twelve items) adopted from Newton et al. (2000), self-confidence (seven items) adopted from Robson (1989) and perceived success (twelve items) adopted from Roberts and Balague (1991). The constructs were measured based on a 5-point Likert scale that ranges from 1 to 5; where 1= Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, and 5= Strongly agree.

## 2.3 Procedure

The study utilizes nonprobability sampling design, which is the judgment sampling. It involves the choice of subjects who are most advantageously placed in the best position to provide the information required. It is the only viable sampling method for obtaining the type of information from very specific pockets of people who alone possess the needed facts and can give the information sought (Sekaran & Bougie, 2010). Thus, based on judgment sampling, the specific criteria in choosing the respondents for the study, is that they must represent the university in sporting events. The study applies self-administered survey questionnaire in collecting the data. The researcher submitted the questionnaire to the team leaders each team and was collected two weeks later. A total of 200 questionnaires were distributed and 80 were returned completed.

## 2.4 Statistical Analysis

Data from a sample size of 80 completed questionnaires is adequate for the PLS-SEM analysis as indicated by Chin (1998) and Hair et al. (2011), where according to the 'ten times rule', minimum sample size should be ten times of the largest number of paths appointed to a particular construct. In the current study, the largest number of paths appointed to a particular construct is 1. Therefore, the minimum sample size required for this study is 10. Thus, a sample of 80 completed questionnaires was adequate for the PLS-SEM analysis method.

## 3. Results

The theoretical model was assessed using PLS-SEM analysis in a two-step process. First, we assessed the measurement model, and then we assessed the structural model (Chin, 2010; Hair et al., 2011). In assessing the measurement model, we examined the validity and reliability of the relationships between the latent variables (LV) and any associated observable variables. In assessing the structural model, we account for the relationships between the theoretical constructs.

Overall, there were three reflective constructs involved in our theoretical model such as perceived motivational climate, self-confidence and perceived success. The constructs are described as "reflective" because the measurement items for each construct are highly correlated with one another. The main criterions for conducting such an evaluation are composite reliability (CR) and average variance extracted (AVE) (Hair et al. 2011). Indicator reliability and construct reliability are tested accordingly to evaluate the reliability of the reflective measurement model for SEM. The loading of each indicator on its associated latent construct was then checked to ascertain indicator reliability. Hair et al., indicated that a loading higher than 0.5 shall be acceptable indicator reliability (Hair et al., 2011).

Table 1 exhibits that all indicators had a loading greater than 0.5. Chin (2010) points out that there are two major coefficients to determine construct reliability such as composite reliability (CR) and Cronbach's alpha. However, CR is more suitable for PLS-SEM and should be greater than 0.7 (Hair et al., 2011). Based on Table 1 the CR for all latent variables (LVs) in the measurement model was greater than 0.800. Thus, the results demonstrate that our measurement model had internal consistency and was reliable.

Convergent and discriminant validity were utilized to measure the validity of the reflective measurement model (Gotz et al., 2010; Hair et al., 2011). LVs with AVE values more than 0.5 for convergent validity are considered acceptable (Bagozzi & Yi, 1988; Chin, 2010; Hair et al., 2011). AVE is used to measure the amount of variance in an LV as contributed by its indicators (Chin, 2010). Table 1 indicates that the AVE values for all constructs used in the measurement model were higher than 0.685 and had loadings higher than 0.5. Therefore, the convergent validity of the measurement model was more than acceptable.

Table 1. Results of Measurement Model

Model Construct	Items	Loadings	AVE	CR
Perceived Motivational Climate	PMC1	0.638	0.685	0.860
	PMC2	0.554		
	PMC3	0.540		
	PMC4	0.633		
	PMC5	0.550		
	PMC8	0.658		
	PMC9	0.533		
	PMC10	0.691		
	PMC11	0.545		
	PMC12	0.803		
Self Confidence	SC1	0.657	0.679	0.820
	SC2	0.638		
	SC3	0.768		
	SC4	0.613		
	SC5	0.769		
Perceived Success	PS1	0.825	0.747	0.848
	PS2	0.697		
	PS4	0.614		
	PS5	0.668		
	PS9	0.566		
	PS10	0.690		
	PS11	0.589		

On the other hand, Chin (1998) described discriminant validity as the extent to which each construct is distinct from one another. To examine the discriminant validity, two measures must be checked. First, the squared AVE of each construct should be higher than the highest correlation of the construct with any other LV in the model, and second, the loading of an indicator with its associated LV must be higher than its' loading with other LVs (Chin, 2010; Hair et al., 2011). Table 2 shows the similarity of the squared AVE of each construct with the correlation of the other constructs.

Table 2. Results of Discriminant Validity

	PMC	PS	SC
PMC	0.828		
PS	0.168879	0.864	
SC	0.341578	0.361354	0.824

Chin (1998) suggests that measures of 0.67, 0.33, and 0.19 for  $R^2$  should be considered substantial, moderate, and weak, respectively. The  $R^2$  values of the endogenous constructs in this study were 0.431 and 0.117 for perceived success and self-confidence respectively. Table 3 and Figure 1 show the results of our structural model for the relationships between the constructs. Table 3 shows the strong, positive, and significant effect of perceived motivation climate and self-confidence same as self-confidence with perceived success.

Table 3. Path Coefficient

Hypotheses	Original Sample (O)	Sample Mean (M)	(STDEV)	(STERR)	T Statistics ( O/STERR )	Sig.
PMC -> SC	0.342	0.364	0.04	0.04	8.516***	Yes
SC -> PS	0.361	0.379	0.05	0.05	7.538***	Yes

The main objective of this study is to examine the indirect effects of the perceived motivational climate and perceived success through self-confidence as a mediator between the two. Therefore, to establish the mediating effect, the indirect effect between independent variable onto mediating variable and mediating variable onto dependent variable must be significant the same as the t-value based on bootstrapping result (Helm et al., 2010). If the t-value is more than 1.28, the hypotheses were considered supported. The t-value can be determined through this formula:

$$1. t = \frac{a*b}{\text{standard deviation of } a*b}$$

Based on Fig.1 there is a significant effect of perceived motivational climate onto self-confidence ( $\beta = 0.342$ ,  $t = 8.516$ ) as well as self-confidence to perceived support ( $\beta = 0.362$ ,  $t = 7.538$ ). The mediating effect was verified by the t-value.

$$t = \frac{0.342*0.362}{0.022}$$

$$t = 5.627$$

The result supports the mediating effect of self-confidence between perceived motivational climate and perceived success, which indicated that there is an indirect relationship of perceived motivational climate and perceived success through self-confidence.

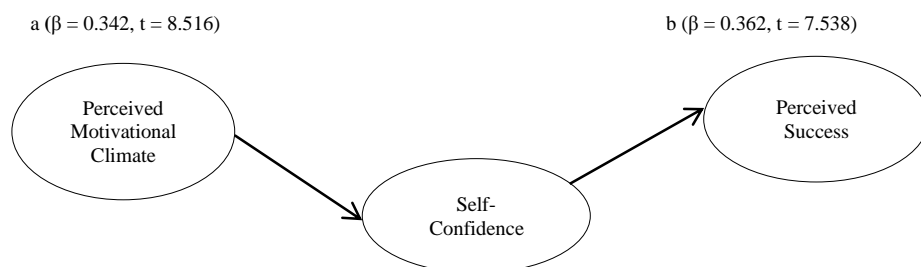


Fig. 1: Mediating Effect of Self-Confidence

Therefore, the results of the mediation test verified the significant indirect effect of self-confidence in the relationship between perceived motivational climates on perceived success. Thus, indicating the significance of self-confidence as a mediator.

#### 4. Discussion and conclusion

The results of the present study indicate that perceived motivational climate has a direct effect on perceived success and the relationship between the two variables is significantly mediated by the student athletes' self-confidence. In other words, how the students perceive the motivational climate will affect their self-confidence and this will impact on how they perceive their chances to succeed in their respective sporting events. These findings support the belief that it is imperative for team managers and sports' psychologists to address the issue of self-confidence among student athletes, however, in order to build their self-confidence will also require for the relevant parties to consider the motivational climate surrounding these student athletes. Furthermore, the motivational climate may strongly influence their desire to succeed.

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